

AMENDMENTS TO THE CLAIMS

Claims 1-15 (canceled)

Claim 16 (currently amended): An isolated nucleic acid sequence selected from the group consisting of:

(a) the nucleotide sequence of SEQ ID NO: 2 encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof;

(b) a nucleotide sequence encoding a protein having the amino acid sequence of SEQ ID NO: 10 which has piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof;

(c) a nucleotide sequence consisting of nucleotides 2855 to 4387 of SEQ ID NO: 2 encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof;

(d) a nucleotide sequence consisting of nucleotides 2077 to 4578 of SEQ ID NO: 2 encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof;

(e) a nucleotide sequence which has at least ~~70%~~ 95% homology with the nucleotide sequence of (c) encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof;

(f) a fragment of nucleotide sequence (a) or (b) encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof ; and

(g) a nucleotide sequence which hybridizes under stringent conditions at 60°C in 2X SSC to sequence (a), (b), (c), (d), (e) or (f).

Claim 17 (previously presented): The isolated nucleotide sequence according to claim 16, which is the nucleic acid sequence of SEQ ID NO: 2 encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof.

Claim 18 (previously presented): The isolated nucleotide sequence according to claim 16, which is the nucleotide sequence encoding a protein having the amino acid sequence of SEQ ID NO: 10 which has piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof.

Claim 19 (previously presented): The isolated nucleotide sequence according to claim 16, which is the nucleotide sequence consisting of nucleotides 2855 to 4387 of SEQ ID NO: 2 encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof.

Claim 20 (previously presented): The isolated nucleotide sequence according to claim 16, which is the nucleotide sequence consisting of nucleotides 2077 to 4578 of SEQ ID NO: 2 encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof.

Claim 21 (currently amended): The isolated nucleotide sequence according to claim 16, which is the nucleotide sequence which has at least ~~70%~~ 95% homology with the nucleotide sequence of (c) encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof.

Claim 22 (previously presented): The isolated nucleotide sequence according to claim 16, which is the fragment of nucleotide sequence (a) or (b) encoding a protein having piperidine-6-carboxylic acid dehydrogenase activity, or a complementary strand thereof.

Claim 23 (currently amended): The isolated nucleotide sequence according to claim 16, which is the nucleotide sequence which hybridizes under stringent conditions at 60°C in 2X SSC to sequence (a), (b), (c), (d), (e) or (f).

Claim 24 (previously presented): The isolated nucleotide sequence according to claim 16, which is obtained from a bacterium belonging to Flavobacterium lutescens.

Claim 25 (previously presented): A nucleic acid construct comprising the nucleic acid sequence according to claim 16.

Claim 26 (previously presented): The nucleic acid construct according to claim 25, which is contained in Flavobacterium lutescens IFO 3084 (pCF213) deposited under accession number FERM BP-6797.

Claim 27 (previously presented): A host cell comprising the nucleic acid construct according to claim 25, wherein the nucleic acid sequence encodes a protein having piperidine-6-carboxylic acid dehydrogenase activity.

Claim 28 (previously presented): A process for producing L-homoglutamic acid, which comprises culturing the host cell according to claim 27 under suitable conditions to produce the protein in the presence of 1-piperidine-6-carboxylic acid, and recovering L-homoglutamic acid.

Claim 29 (previously presented): The process according to claim 28, wherein the host cell is a bacterium belonging to the genus Flavobacterium.

Claim 30 (previously presented): The process according to claim 28, wherein the host cell is Flavobacterium lutescens IFO 3084 (pCF213) deposited under accession number FERM BP-6797.